

CLAIMS

What is claimed is:

- 1 1. A storage medium having stored therein a plurality of programming
2 instructions executable by a processor, wherein when executed, the programming
3 instructions implement a multi-media call application that effectuate quality of
4 service (QOS) guaranty for a packet based multi-media call (CALL) through call
5 associated individual media stream bandwidth control.
- 1 2. The storage medium as set forth in Claim 1, wherein the programming
2 instructions determine if a sub-net bandwidth manager (SBM) that manages network
3 bandwidth is connected to a local area network (LAN) through which the CALL is
4 conducted, and if the SBM is connected to the LAN, register the CALL with the SBM
5 and reserve with the SBM bandwidth for subsequent allocation to media streams of
6 the CALL.
- 1 3. The storage medium as set forth in Claim 2, wherein the programming
2 instructions make the determination, registration and bandwidth reservation for
3 subsequent allocation to media streams of the CALL as an integral part of
4 establishing a connection for the CALL.
- 1 4. The storage medium as set forth in Claim 2, wherein the programming
2 instructions further subsequently cause the SBM to allocate the reserved bandwidth
3 for the CALL to individual media streams of the CALL.

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1 5. The storage medium as set forth in Claim 4, wherein the programming
2 instructions invoke a bandwidth reservation service to request the SBM to allocate
3 the reserved bandwidth for the CALL to individual ones of the media streams of the
4 CALL, providing call level information to the bandwidth reservation service to enable
5 the bandwidth reservation service to include the call level information in the requests
6 for the SBM.

1 6. The storage medium as set forth in Claim 5, wherein the programming
2 instructions invoke the bandwidth reservation service to request the SBM to allocate
3 a portion of the reserved bandwidth for the CALL to an individual media stream of
4 the CALL while establishing an individual channel for the individual media stream
5 during the CALL.

1 7. The storage medium as set forth in Claim 1, wherein the CALL is an ITU-T
2 H.323 compatible video conference call.

1 8. The storage medium as set forth in Claim 7, wherein the programming
2 instructions further determine if a call level admission control gatekeeper is
3 connected to a local area network (LAN) through which the CALL is to be
4 conducted, and if the call level admission control gatekeeper is connected to the
5 LAN, register the CALL with the call level admission control gatekeeper, the
6 registration being made in a manner that causes the call level admission control
7 gatekeeper to determine whether to admit the CALL into the LAN without taking into
8 consideration bandwidth requirement of the CALL.

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1 9. The storage medium as set forth in Claim 8, wherein the programming
2 instructions make the determination and conditional registration as an integral part
3 of establishing a connection for the CALL.

1 10. A storage medium having stored therein a plurality of programming
2 instructions executable by a processor, wherein when executed, the programming
3 instructions implementing a bandwidth reservation service that requests a sub-net
4 bandwidth manager (SBM) to allocate a portion of reserved bandwidth for a packet
5 based multi-media call (CALL) to an individual media stream of the CALL, providing
6 the SBM with call level information to allow the SBM to associate the individual
7 media stream of the CALL with the reserved bandwidth of the CALL, the SBM
8 managing network bandwidth of a local area network (LAN) through which the CALL
9 is conducted.

1 11. The storage medium as set forth in Claim 10, wherein the programming
2 instructions request the SBM to allocate a portion the reserved bandwidth of the
3 CALL to the individual media stream of the CALL while establishing an individual
4 channel for the individual media stream during the CALL.

1 12. The storage medium as set forth in Claim 10, wherein the programming
2 instructions are integral part of an operating system.

1 13. The storage medium as set forth in Claim 10, wherein the CALL is an ITU-T
2 H.323 compatible video conference call.

1 14. A method comprising:

2 (a) a multi-media call application first reserving bandwidth for media streams
3 of a packet based multi-media call (CALL) at a call level with a sub-net bandwidth
4 manager (SBM) that manages network bandwidth of a local area network (LAN)
5 through which the CALL is to be conducted; and

6 (b) the multi-media call application subsequently causing the SBM to allocate
7 the reserved bandwidth for the CALL to individual media streams of the CALL,
8 causing call level information to be provided to the SBM to enable the SBM to
9 associate the individual media streams of the CALL with the reserved bandwidth of
10 the CALL.

1 15. The method as set forth in Claim 14, wherein (a) is performed as an integral
2 part of the multi-media call application establishing a connection for the CALL.

1 16. The method as set forth in Claim 14, wherein (b) comprises the multi-media
2 call application invoking a bandwidth reservation service to request the SBM to
3 allocate the reserved bandwidth for the CALL to the individual media streams of the
4 CALL, providing the bandwidth reservation service with call level information for
5 inclusion in the requests to enable the SBM to associate the individual media
6 streams of the CALL with the CALL.

1 17. The method as set forth in Claim 16, wherein (b) is performed on a per
2 individual media stream basis as an integral part of establishing an individual
3 channel for the individual media stream.

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1 18. The method as set forth in Claim 14, wherein the method further comprises
2 (c) the multi-media call application determining if a call level admission control
3 gatekeeper is connected to the LAN while establishing connection for the CALL.

1 19. The method as set forth in Claim 18, wherein if the call level admission
2 control gatekeeper is connected to the LAN, (c) further comprises the multi-media
3 application registering the CALL with the call level admission control gatekeeper in a
4 manner that causes the gatekeeper to determine whether to admit the CALL into the
5 LAN without taking into consideration bandwidth requirement of the CALL.

1 20. An apparatus comprising:
2 a storage medium having stored therein a plurality of programming
3 instructions implementing a multi-media call application that effectuates quality of
4 service (QOS) guaranty for a packet based multi-media call (CALL) using call
5 associated individual media stream bandwidth control; and
6 a processor coupled to the storage medium that operates to execute the
7 programming instructions.

1 21. The apparatus as set forth in Claim 20, wherein the programming instructions
2 determine if a sub-net bandwidth manager (SBM) that manages network bandwidth
3 is connected to a local area network (LAN) through which the CALL is conducted,
4 and if the SBM is connected to the LAN, register the CALL with the SBM and
5 reserve with the SBM bandwidth for subsequent allocation to media streams of the
6 CALL.

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1 22. The apparatus as set forth in Claim 21, wherein the programming instructions
2 make the determination, registration and bandwidth reservation for subsequent
3 allocation to media streams of the CALL as an integral part of establishing a
4 connection for the CALL.

1 23. The apparatus as set forth in Claim 21, wherein the programming instructions
2 further subsequently cause the SBM to allocate the reserved bandwidth for the
3 CALL to individual media streams of the CALL.

1 24. The apparatus as set forth in Claim 23, wherein the programming instructions
2 invoke a bandwidth reservation service to request the SBM to allocate the reserved
3 bandwidth for the CALL to individual ones of the media streams of the CALL,
4 providing call level information to the bandwidth reservation service to enable the
5 bandwidth reservation service to include the call level information in the requests for
6 the SBM.

1 25. The storage medium as set forth in Claim 24, wherein the programming
2 instructions invoke the bandwidth reservation service to request the SBM to allocate
3 a portion of the reserved bandwidth for the CALL to an individual media stream of
4 the CALL while establishing an individual channel for the individual media stream
5 during the CALL.

1 26. An apparatus comprising:
2 a storage medium having stored therein a plurality of programming
3 instructions implementing a bandwidth reservation service that requests a sub-net
4 bandwidth manager (SBM) to allocate a portion of reserved bandwidth for a packet

5 based multi-media call (CALL) to an individual media stream of the CALL, providing
6 the SBM with call level information to allow the SBM to associate the individual
7 media stream of the CALL with the reserved bandwidth of the CALL, the SBM
8 managing network bandwidth of a local area network (LAN) through which the CALL
9 is conducted; and

10 a processor coupled to the storage medium that operates to execute the
11 programming instructions.

1 27. The apparatus as set forth in Claim 26, wherein the programming instructions
2 request the SBM to allocate a portion the reserved bandwidth of the CALL to the
3 individual media stream of the CALL while establishing an individual channel for the
4 individual media stream during the CALL.

1 28. The apparatus as set forth in Claim 26, wherein the programming instructions
2 are integral part of an operating system.

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